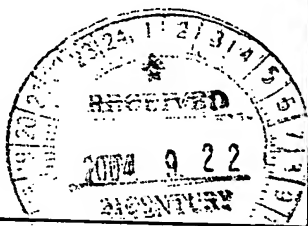


# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
PARK Young-Woo  
5F, Seil Building, #727-13,  
Yoksam-dong,  
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135-921 Seoul  
Republic of Korea



## PCT

### NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty) (PCT Rule 71.1)

Date of mailing  
(day/month/year) 16 September 2004 (16.09.2004)

Applicant's or agent's file reference  
LW8044PC

#### IMPORTANT NOTIFICATION

International application No.  
PCT/KR 2003/001510

International filing date (day/month/year)  
29 July 2003 (29.07.2003)

Priority Date (day/month/year)  
3 August 2002 (03.08.2002)

Applicant  
SAMSUNG ELECTRONICS CO LTD

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/AT

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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>LW8044PC</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR 2003/001510</b>	International filing date ( <i>day/month/year</i> ) <b>29 July 2003 (29.07.2003)</b>	Priority Date ( <i>day/month/year</i> ) <b>3 August 2002 (03.08.2002)</b>
International Patent Classification (IPC) or national classification and IPC  <b>IPC<sup>7</sup>: G02F 1/13357, G02B 6/00</b>		
Applicant <b>SAMSUNG ELECTRONICS CO LTD</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of   3   sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of                      sheets.

3. This report contains indications relating to the following items:

- I.      ☒ Basis of the opinion
- II.     ☐ Priority
- III.    ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV.    ☒ Lack of unity of invention
- V.     ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI.    ☐ Certain documents cited
- VII.   ☐ Certain defects in the international application
- VIII. ☐ Certain observations on the international application

Date of submission of the demand  <div style="text-align: center; font-weight: bold;">26.02.2004</div>	Date of completion of this report  
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer  <div style="text-align: center; font-weight: bold;">GRONAU E.</div> Telephone No. 1/53424/320

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR 2003/001510

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

☒ the international application as originally filed

☐ the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the claims:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement) under Article 19

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the drawings:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_.

☐ the claims, Nos. \_\_\_\_\_.

☐ the drawings, sheets/fig \_\_\_\_\_.

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

*\*\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/KR 2003/001510

## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirements of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirements of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☒ complied with.
- ☐ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this opinion:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/KR 2003/001510

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement			
Novelty (N)	Claims	6,7-11,13-15	YES
	Claims	1-5,8,12	NO
Inventive step (IS)	Claims	6,14,15	YES
	Claims	1-5,7-13	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims	----	NO

### Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: US 5123077 A  
D2: EP 0663600 A1  
D3: EP 0607453 A1  
D4: US 5450292 A  
D5: EP 0500960 A1

Document D1 discloses a backlight assembly comprising a plurality of light generating parts, a light guide plate including light incident side surfaces, a curved light exiting surface having a plurality of luminance-compensating pattern ( in the form of rough surfaces), and a light reflecting surface facing the light emitting surface. The luminance-compensating patterns render a luminance of the light exiting from the light guide plate uniform. A thickness of the light guide plate decreases in a direction from the light incident surface to a centre of the plate. First and second light generating parts are disposed on side surfaces of the light guide plate. In addition, a plurality of light generating parts may be arranged at each side surface of the light guide plate, see col.7, line 57-59. As shown in Fig. 1,2 and 6 of D1, a liquid crystal display apparatus comprises a reflective plate disposed under the light guide plate, a receiving container for the back light assembly, an LCD panel and a top chassis.

The subject matter of claims 1,2,5, 8 and 12 is anticipated by the disclosure of D1.

Document D2 discloses a backlight assembly for a LCD device which comprises light sources arranged at one side surface, or alternatively, at two opposite side surfaces or at three side surfaces of a light guide plate. The light guide plate has a light emitting surface and an opposed light reflecting surface. A luminance-compensating pattern (in form of prismatic elements) is formed on the light emitting surface. A thickness of the light guide plate is made smaller near the centre than at the light incident sides of the plate, see Fig.7(ii). In one embodiment, the light reflecting surface can be curved, see col.6, line 19-

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V (page 1)

23. As shown in Fig. 8, first, second and third light generating parts form an U-shape. A reflective sheet covering the light sources is integrally formed with a reflecting member disposed under the light reflecting surface of the light guide plate, see Fig.3,5.

Hence, the subject matter of claims 1-4 is also anticipated by the disclosure of D2. A combination of the disclosure of D1 and D2 renders subject matter of claim 9 obvious.

In Fig.19 of document D3, there is shown an arrangement of light sources for a LCD backlight where first and second light generating parts and third and fourth light generating parts are integrally formed to form first and second L-shaped lamps.

Hence, the subject matter of claim 7 is rendered obvious by combination of the disclosure of D1 and D3.

Document D4 relates to a back light assembly comprising a light guide plate which has a plurality of luminance-compensating patterns formed on its back surface opposite to its light emitting surface. The back surface is curved; a reflector is disposed on or near the backside having the same contour as the curved back side, see col.3, line 56-60 and Fig.19. Light generating parts may be disposed at two opposite sides or at all four sides of the light guide plate, see Fig. 14-18. The luminance-compensating patterns are formed denser and have a larger size in the centre of the light guide plate than near the light generating parts.

A similar light guide plate of a back light assembly is disclosed in document D5 with the difference that the light guide plate has a uniform thickness and that the luminance-compensating patterns may be disposed either on the light emitting surface or on the opposed surface or on each of them, see pg.5, line 3-10. A reflecting layer may comprise a film and an evaporated metal, see pg.5, line 35-37.

A combination of D4 and D5 renders the subject matter of claims 1-5, 7, 8, 10 and 11 obvious for a person skilled in the art.

Since it is known from D4 that the light reflecting member which is disposed on a lower surface of the light reflecting surface of the light guide plate has the same contour as that of the backside of the light guide plate, a combination of the disclosure of D1 and D4 renders the subject matter of claim 13 obvious.

The subject matter of claims 6, 14 and 15 of the present application is neither anticipated nor rendered obvious by any one of the cited references or by a combination thereof.

Industrial applicability is given.